

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-2. (Canceled)

1 3. (Withdrawn) An information network system comprising:
2 a plurality of computer systems;
3 a communication network, to which at least some of said computer systems are
4 communicatively coupled;
5 a functionally coherent and physically distributed cache memory comprising a
6 plurality of memory portions each within a memory of a computer system among a first set of
7 said computer systems; and
8 a functionally coherent and physically distributed data storage device comprising
9 a plurality of data storage portions each within a data storage device of a computer system
10 among said first set of computer systems, at least one of said computer systems being configured
11 to perform data I/O with said functionally coherent and distributed data storage device.

1 4. (Withdrawn) The system of claim 3 wherein said functionally coherent
2 and physically distributed cache memory is operable as data cache for I/O operations with said
3 functionally coherent and physically distributed data storage device.

1 5. (Withdrawn) The system of claim 3 wherein said first set of computer
2 systems comprises all of said computer systems.

1 6. (Withdrawn) The system of claim 3 wherein said first set of computer
2 systems comprises a subset of said computer systems.

1 7. (Withdrawn) The system of claim 6 wherein another computer system,
2 not belonging to said first set of computer systems, can access said functionally coherent and
3 physically distributed data storage device.

1 8. (Withdrawn) The system of claim 3 wherein said functionally coherent
2 and physically distributed data storage device is configured as a functionally coherent and
3 physically distributed RAID storage device.

1 9. (Withdrawn) The system of claim 3 wherein said memory portions are
2 portions of volatile random access memories of said first set of computer systems.

1 10. (Withdrawn) An information network comprising:
2 a first set of computer systems each having means for organizing a portion of its
3 memory as a unified multiple-computer system cache memory; and
4 a second set of computer systems each having means for organizing a portion of
5 its data storage as a unified multiple-computer-system data storage device accessible to at least
6 some of said information network to perform I/O.

1 11. (Withdrawn) The system of claim 10 wherein said unified multiple-
2 computer system cache memory comprises a portion of memory from each of said computer
3 systems and said unified data storage device comprises a portion of data storage of a data storage
4 device of at least one of said computer systems.

1 12. (Withdrawn) The system of claim 10 wherein said unified data storage
2 device is configured to be accessible to at least one computer system not belonging to said
3 second set.

1 13. (Withdrawn) The system of claim 10 wherein said unified data storage
2 device is configured as a distributed RAID storage device.

1 14. (Withdrawn) The system of claim 10 wherein said portions of memory
2 are portions of volatile random access memories of said first set of computer systems.

1 15. (Withdrawn) A method for operating an information network comprising:
2 organizing into a unified data storage device at least one data storage portion from
3 each of a first plurality of computer systems of said network; and
4 performing data I/O access to the unified data storage device using a distributed
5 cache memory that includes at least one memory portion from each of a second plurality of
6 computer systems of said information network.

1 16. (Withdrawn) The method of claim 15 further comprising defining all
2 computer systems in said information network as said second plurality.

1 17. (Withdrawn) The method of claim 15 further comprising defining said
2 second plurality as a subset of said information network.

1 18. (Withdrawn) The method of claim 17 further comprising accessing said
2 unified data storage device with at least one computer system that is not one of said first
3 plurality.

1 19. (Withdrawn) The method of claim 15 further comprising configuring said
2 distributed data storage device as a distributed RAID storage device.

1 20. (Withdrawn) The method of claim 15 in which volatile memories are
2 configured as at least some of the memory portions.

1 21. (Withdrawn) The method of claim 15 further comprising defining said
2 first plurality as a subset of said information network.

1 22. (Withdrawn) An information network system comprising:
2 a plurality of computer systems;
3 a communication network, to which at least some of said computer systems are
4 communicatively coupled;
5 a distributed cache memory comprising a plurality of memory portions, each
6 memory portion being a portion of a memory of a computer system among a subset of said
7 computer systems, said memory portions being organized to function as a single coherent cache
8 memory; and
9 a distributed data storage device comprising a plurality of data storage portions,
10 each data storage portion being a portion of storage of one or more data storage devices of a
11 computer system among said subset of computer systems, said data storage portions being
12 organized to function as a single data storage device, wherein said computer systems can
13 perform data I/O with said distributed data storage device and wherein said distributed cache
14 memory is operable as a cache memory for said distributed data storage device.

1 23. (Withdrawn) An information network comprising:
2 a plurality of computer systems;
3 each computer system among at least a first subset of said computer systems
4 having first means for performing distributed caching, wherein each first means provides a
5 portion of memory from its corresponding computer system, wherein all of said first means
6 cooperate to provide a unified system cache memory from among said portions of memory; and
7 each computer system among said first subset further having second means for
8 performing distributed data storage, wherein each second means provides a portion of data
9 storage of a data storage device from its corresponding computer system, wherein all of said
10 second means cooperate to provide a single data storage device, wherein said computer systems
11 access said single data storage device to perform I/O.

12 24. (Withdrawn) A method for an information network comprising a plurality
13 of computer systems, the method comprising:

14 each computer system among a first set of said computer systems providing a
15 portion of its RAM memory, collectively referred to as a plurality of memory portions;

16 organizing said memory portions into a unified cache memory;

17 each computer system among said first set of computer systems providing a
18 portion or portions of one or more its data storage devices, collectively referred to as a plurality
19 of data storage portions; and

20 organizing said data storage portions into a single data storage device; and

21 providing data I/O access to said single data storage device, wherein any of said
22 plurality of computer systems can access said single data storage device.

1 25. (New) An information backup system comprising:

2 a plurality of computer systems;

3 a communication network, to which at least some of said computer systems are
4 communicatively coupled;

5 a functionally coherent and physically distributed cache memory comprising a
6 plurality of memory portions each within a memory of a computer system among a first set of
7 said computer systems; and

8 a functionally coherent and physically distributed data storage device comprising
9 a plurality of data storage portions each within a data storage device of a computer system
10 among said first set of computer systems, at least one of said computer systems being configured
11 to perform data I/O with said functionally coherent and distributed data storage device.

1 26. (New) The system of claim 25 wherein said functionally coherent and
2 physically distributed cache memory is operable as data cache for I/O operations with said
3 functionally coherent and physically distributed data storage device.

1 27. (New) The system of claim 25 wherein said first set of computer systems
2 comprises all of said computer systems.

1 28. (New) The system of claim 25 wherein said first set of computer systems
2 comprises a subset of said computer systems.

1 29. (New) The system of claim 28 wherein another computer system, not
2 belonging to said first set of computer systems, can access said functionally coherent and
3 physically distributed data storage device.

1 30. (New) The system of claim 25 wherein said functionally coherent and
2 physically distributed data storage device is configured as a functionally coherent and physically
3 distributed RAID storage device.

1 31. (New) The system of claim 25 wherein said memory portions are portions
2 of volatile random access memories of said first set of computer systems.

1 32. (New) An information backup system comprising:
2 a first set of computer systems each having means for organizing a portion of its
3 memory as a unified multiple-computer system cache memory; and
4 a second set of computer systems each having means for organizing a portion of
5 its data storage as a unified multiple-computer-system data storage device accessible to at least
6 some of said information network to perform I/O.

1 33. (New) The system of claim 32 wherein said unified multiple-computer
2 system cache memory comprises a portion of memory from each of said computer systems and
3 said unified data storage device comprises a portion of data storage of a data storage device of at
4 least one of said computer systems.

1 34. (New) The system of claim 32 wherein said unified data storage device is
2 configured to be accessible to at least one computer system not belonging to said second set.

1 35. (New) The system of claim 32 wherein said unified data storage device is
2 configured as a distributed RAID storage device.

1 36. (New) The system of claim 32 wherein said portions of memory are
2 portions of volatile random access memories of said first set of computer systems.

1 37. (New) A method for operating an information backup system comprising:
2 organizing into a unified data storage device at least one data storage portion from
3 each of a first plurality of computer systems of said network; and
4 performing data I/O access to the unified data storage device using a distributed
5 cache memory that includes at least one memory portion from each of a second plurality of
6 computer systems of said information network.

1 38. (New) The method of claim 37 further comprising defining all computer
2 systems in said information network as said second plurality.

1 39. (New) The method of claim 37 further comprising defining said second
2 plurality as a subset of said information network.

1 40. (New) The method of claim 39 further comprising accessing said unified
2 data storage device with at least one computer system that is not one of said first plurality.

1 41. (New) The method of claim 37 further comprising configuring said
2 distributed data storage device as a distributed RAID storage device.

1 42. (New) The method of claim 37 in which volatile memories are configured
2 as at least some of the memory portions.

1 43. (New) The method of claim 37 further comprising defining said first
2 plurality as a subset of said information network.

1 44. (New) An information backup system comprising:
2 a plurality of computer systems;
3 a communication network, to which at least some of said computer systems are
4 communicatively coupled;
5 a distributed cache memory comprising a plurality of memory portions, each
6 memory portion being a portion of a memory of a computer system among a subset of said
7 computer systems, said memory portions being organized to function as a single coherent cache
8 memory; and
9 a distributed data storage device comprising a plurality of data storage portions,
10 each data storage portion being a portion of storage of one or more data storage devices of a
11 computer system among said subset of computer systems, said data storage portions being
12 organized to function as a single data storage device, wherein said computer systems can
13 perform data I/O with said distributed data storage device and wherein said distributed cache
14 memory is operable as a cache memory for said distributed data storage device.

1 45. (New) An information backup system comprising:
2 a plurality of computer systems;
3 each computer system among at least a first subset of said computer systems
4 having first means for performing distributed caching, wherein each first means provides a
5 portion of memory from its corresponding computer system, wherein all of said first means
6 cooperate to provide a unified system cache memory from among said portions of memory; and
7 each computer system among said first subset further having second means for
8 performing distributed data storage, wherein each second means provides a portion of data
9 storage of a data storage device from its corresponding computer system, wherein all of said
10 second means cooperate to provide a single data storage device, wherein said computer systems
11 access said single data storage device to perform I/O.

46. (New) A method for an information backup system comprising a plurality of computer systems, the method comprising:

- each computer system among a first set of said computer systems providing a portion of its RAM memory, collectively referred to as a plurality of memory portions;

- organizing said memory portions into a unified cache memory;

- each computer system among said first set of computer systems providing a portion or portions of one or more its data storage devices, collectively referred to as a plurality of data storage portions; and

- organizing said data storage portions into a single data storage device; and

- providing data I/O access to said single data storage device, wherein any of said plurality of computer systems can access said single data storage device.